

United States
Environmental Protection
Agency

Office of Emergency and
Remedial Response
(5201G)



Industri-Plex Site

Woburn, Massachusetts

A Superfund Redevelopment Success

Industri-Plex Superfund Site At a Glance

Problem: Contamination of soil and groundwater resulting from over a hundred years of chemical manufacturing and processing.

Solution: Exposure to contaminants prevented by construction of soil, synthetic, and other covers, a gas collection and treatment system, an interim groundwater treatment system, and land use restrictions.

Redevelopment: A public/private partnership has resulted in plans to redevelop the site into a Regional Transportation Center, over 200,000 square feet of retail space, and potentially over 750,000 square feet of hotel and office space.

As part of the Superfund program, EPA is entering into partnerships with other Federal agencies, State and local governments, and private developers to clean up and return hazardous waste sites to beneficial uses for the community. The Industri-Plex Superfund site, a former chemical manufacturing facility located in Woburn, Massachusetts, is an example of how EPA's Superfund program is returning land to productive use. Once a contaminated property that threatened human health and the environment, the site is now poised to become a major commercial and retail district, a state regional transportation center, and a wetland preserve. This report describes the cleanup and redevelopment underway at the Industri-Plex Superfund site as of June 1998, and provides estimates of the economic impacts and the environmental and social benefits that are likely to result.

Source: Dayton-Hudson Corp.



A 135,000 square foot Target discount store, shown in this conceptual drawing, is one of several redevelopment projects planned for the Industri-Plex Superfund site.



SDMS DocID

256596

Site Snapshot

The Industri-Plex Superfund site is a 245-acre property located in a dense commercial and industrial area in Woburn, Massachusetts, a city 12 miles north of Boston. The site comprises both commercially developed and undeveloped property. Commerce Way, a major access road, and a commuter rail line run through the site. Several ponds and wetland areas that support various fish, wildlife, and vegetation are located on or next to the site. In addition, two streams cross the property and eventually feed into the Upper Mystic Lakes, a popular recreation area located six miles downstream.

The Town of Reading is located to the east of the site on the opposite side of Interstate 93 and commercial property lies to the west, south, and north. The nearest residential property is located within 1,000 feet of the site, and there are an estimated 13,000 households within two miles. Interstate 93 runs adjacent to the site on the east side. The I-93/I-95 interchange, considered to be one of the busiest junctions in the State, is approximately one mile northwest of the site.



From 1853 to 1969, a succession of manufacturers at the site produced chemicals, insecticides, munitions, and glue products made from raw and chrome-tanned animal hides. As a result of these activities, large waste piles of animal hides remain. Soil at the site is contaminated with lead, arsenic, and chromium, and the groundwater beneath portions of the site is contaminated with benzene, toluene, arsenic, and chromium. Since 1969, a variety of industrial and commercial establishments have occupied portions of the site. Approximately 60 acres are currently used for warehousing and distribution.

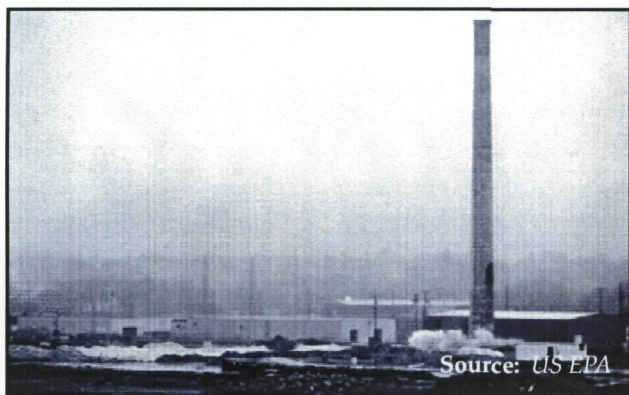
Cleanup

To address the immediate threats posed by the site, EPA and the State undertook several short-term actions in 1980 and 1981. These actions included placing a temporary cover over contaminated portions and restricting access. In September 1983, EPA added Industri-Plex to the Superfund National Priorities List—the Agency's list of hazardous waste sites needing cleanup. After conducting detailed investigations and soliciting community input, EPA, with concurrence from the State, unveiled a plan to clean the contaminated portions of the site. EPA provided Federal funds to the local community in the form of a grant allowing them to become better educated about the technical aspects of the cleanup plan.

The cleanup plan included controlling the sources of contamination by demolishing buildings on the site and constructing several protective covers (e.g., soil, clay, and synthetic layers, concrete foundations, asphalt parking lots) over portions of the approximately 110 acres of contaminated soil. The plan called for a system to collect and treat gases that may form under the

covers. The cleanup plan also identified an area of highly contaminated groundwater requiring treatment to reduce contaminants and limit migration away from the site. In addition, the cleanup plan requires further groundwater and surface water investigations to evaluate any possible additional groundwater contamination. EPA has overseen two phases of groundwater and surface water investigations and is reviewing the need for additional investigations. EPA is also placing restrictions on future land use at the site to preserve the effectiveness of the cleanup while accommodating future use of the property as long as the integrity of the cleanup measures is maintained.

As part of a 1989 settlement between EPA, the Massachusetts Department of Environmental Protection, the City of Woburn, and 24 current and former land owners who were named potentially responsible parties for the contamination at the site, two trusts were created. The first trust, the Industri-Plex Site Remedial Trust, is responsible for funding, constructing, and maintaining the EPA-selected remedy. The second trust, discussed in the following section, is responsible for site redevelopment.



Before Cleanup: Manufacturing plants at Industri-Plex, which contributed to the extensive contamination of the soil and groundwater, were demolished as part of the cleanup.

Redevelopment

At the heart of the redevelopment is a public and private partnership that has generated broad support for infrastructure investments at the site. This partnership is reflected in the Industri-Plex Site Custodial Trust, which facilitates development by taking ownership, managing, and selling the approximately 120 acres of undeveloped land within the site. The Custodial Trust has worked extensively with Federal, State, and local officials and the neighboring communities to promote the redevelopment of the Industri-Plex site and its surrounding areas.

There are three principal public transportation/infrastructure initiatives and two private redevelopment initiatives planned or underway for Industri-Plex. The three transportation and infrastructure projects include:

- Construction of a Regional Transportation Center. Three state transportation agencies (the Massachusetts Port Authority, the Massachusetts Bay Transportation Authority, and the Massachusetts Highway Department) are undertaking this project, which will accommodate a 36-acre transportation facility in the western



During Cleanup: The cleanup of Industri-Plex included the construction of several protective covers over portions of the site, allowing the site to be put back into productive use.

portion of the site and will provide 2,400 parking spaces for commuter train service, Park and Ride bus service, and Logan Express airport shuttle service to Boston.

- Construction of the I-93 Woburn Interchange. The interchange lies approximately one mile north of the existing I-95/I-93 interchange and will alleviate severe regional traffic congestion and provide access to the Industri-Plex site development. Construction began in fall 1997 and the interchange is scheduled to open between fall 1999 and spring 2000.
- Improvements and an extension to Commerce Way. This road serves as the main thoroughfare through the Industri-Plex site. The extension will provide critical access to otherwise inaccessible tracts of land and will also improve access to the commercial areas of Woburn north of the Industri-Plex site. In April 1997, the State awarded a \$1.9 million Public Works Economic Development grant to the City of Woburn for the improvement of Commerce Way from Mishawum Road to its current terminus at Atlantic Avenue, the location at which the planned I-93 interchange off-ramp merges with local traffic. The grant will extend Commerce Way approximately 1,200 feet northward. Construction began in fall 1997 and will be completed by fall 1999 with the I-93 Interchange project.

The two proposed private redevelopment initiatives at the site include:

- The 29.6-acre Retail Parcel ("Parcel A"). This area is situated in the southeastern portion of the site and was rezoned by the City of Woburn for retail use. This parcel has permits that allow for up to 200,000 square feet of redevelopment.

The Parcel A was sold to the Dayton-Hudson Corporation, owner of Target Stores, for \$11.5 million. Dayton-Hudson is scheduled to begin construction of a Target Store to coincide with the construction of the I-93 interchange.

- The 50-acre Mixed Use Parcel ("Parcel B"). This area is situated in the northeastern portion of the site. Discussions are underway to develop up to 750,000 square feet of office and hotel space.

To advance the various proposals to redevelop the site, EPA has entered into several Prospective Purchaser Agreements (PPAs). In 1996, EPA signed a PPA with the three Massachusetts transportation agencies to redevelop the 36-acre Regional Transportation Center. As part of this PPA, EPA agreed not to hold the transportation agencies responsible for the pre-existing contamination at the site. In return, the State agencies agreed to pay for and construct a design

What is a Prospective Purchaser Agreement?

A Prospective Purchaser Agreement (PPA) is one of several tools that EPA uses to encourage the cleanup and redevelopment of Superfund and other hazardous waste sites. A PPA is a legal agreement that protects the prospective buyer of a hazardous waste site from the liability associated with the pre-existing contamination at the site. In return for liability protection, the buyer must advance environmental and/or community benefits at the site, such as performing cleanup activities, reimbursing EPA for a portion of their cleanup costs, and/or providing substantial community benefits in the form of job creation, property rehabilitation, or community revitalization. PPAs often enable redevelopment plans to be integrated into the cleanup activities at the site and ensure the long-term maintenance and operation of the cleanup.

modification to the protective cover on that portion of the site, provide EPA future access to the property and adhere to requirements that prevent future activities that disturb the cover. The design modification improves the protectiveness of the cover by increasing its depth and providing for an asphalt cover that will serve as a parking lot. EPA entered into a second PPA with the Dayton-Hudson Corporation and National Development for the purchase and redevelopment of Parcel A. Under this PPA, EPA agreed not to hold the companies responsible for the pre-existing contamination at the site in return for financial considerations for the cleanup, restrictions on future activities that could disturb the cover, and EPA future access. Discussions for a similar PPA are underway with National Development for Parcel B, which may result in the development of an office and hotel complex.

The Industri-Plex site redevelopment project is also facilitating a broader redevelopment effort in the surrounding area. The proposed Presidential Way Development, located immediately to the north and west of Parcel B in Wilmington, includes 345,000 square feet of office and light manufacturing space, with the potential for an additional 600,000 square feet. The proposed Kennedy Development, situated south of the site in Woburn, is expected to include 170,000 square feet of retail space. The Inwood Office Development, planned for a parcel of land east of the site on the opposite side of Interstate 93 in Reading, will include 850,000 square feet of office space.

Benefits

The redevelopment of the Industri-Plex Superfund site will have a positive effect on the local community. In particular, the redevelopment will result in positive economic impacts, as well as significant environmental and social benefits. A summary

of these benefits as of June 1998 is provided below. Additional information on the calculations used to estimate the economic impacts is provided in the Technical Appendix to this fact sheet.

Economic Impacts

Redevelopment of the Industri-Plex site will likely result in a significant number of short-term and permanent jobs. During the two years of redevelopment activities at the site, an average of 700 short-term jobs will be supported each year with an estimated total annual income of \$23.6 million. Over 4,300 permanent jobs are expected if all available areas of the site are redeveloped. The total annual income associated with these permanent jobs is estimated to be approximately \$147 million, which is expected to result in personal spending of almost \$118 million.

The redevelopment will also result in significant public revenue. For example, the income associated with the permanent jobs

Positive Economic Impacts

- An average of over 700 short-term jobs per year supported during two years of redevelopment with an estimated total annual income of \$23.6 million.
- Over 4,300 permanent jobs associated with best case redevelopment scenario.
- Approximately \$147 million in annual income associated with permanent jobs, which is expected to result in almost \$118 million in personal spending.
- Over \$13 million in State income and sales taxes associated with spending by permanent employees.
- Over \$1.5 million in State retail sales taxes annually.
- Up to \$4.6 million increase in residential property values within two miles of site.

will result in over \$8.7 million in State income tax, as well as up to \$4.7 million in State sales taxes resulting from expected purchases in the local economy made by permanent employees. Additional sales tax revenues will result from retail sales at the planned Target and hotel complex, which is estimated to be over \$1.5 million each year. The cleanup and redevelopment will also have positive effects on property values at and around the site. Cleanup of the site is expected to lead to an estimated increase of up to \$4.6 million in total residential property values within two miles.

Another benefit associated with the redevelopment of the Industri-Plex site is the stimulus it provides to the local and regional economy in general, and to other local development projects in particular. Completion of the Presidential Way, Kennedy, and Inwood developments could result in the creation of additional permanent jobs along with associated income, expenditure and revenue benefits.

Environmental Benefits

In keeping with EPA's mission, the primary benefit achieved through the cleanup of the Industri-Plex site is the long-term protection of human health and the natural environment. Controlling the sources of soil contamination by capping portions of the site has eliminated exposure to contaminants by future on-site workers, visitors, or trespassers. The interim groundwater treatment and containment system is expected to eliminate the potential migration of contaminants from the site, including two inactive public drinking water supply wells. The combination of caps and the groundwater cleanup will also reduce the threat of contamination migrating to wetlands located on and adjacent to the site.

Redevelopment projects will provide an environmental benefit by enhancing the

Environmental Benefits

- Reduced exposure to contaminants by enhanced protectiveness of the caps.
- Progress toward Clean Air Act compliance as a result of reduced auto emissions.
- Creation of an open land and wetlands preserve.

protectiveness of covers constructed as part of the cleanup. Specifically, the Regional Transportation Center will increase the depth of part of the cover from 16 inches to almost 48 inches. The extension of Commerce Way, which will cover an approximately 800 square foot area of contaminated soil, will also enhance the protectiveness of the cover.

The I-93 Woburn Interchange and Regional Transportation Center will provide another environmental benefit by removing an estimated 2,400 cars from the highway, which will contribute to an improvement in air quality and will help the Commonwealth to comply with Federal Clean Air Act regulations. In addition, a 75-acre portion of the Industri-Plex site that is the focus of cleanup activities will likely be designated as an open land and wetlands preserve, providing an additional long-term environmental benefit.

Social Benefits

Social benefits are an important result of the cleanup and redevelopment of the Industri-Plex Superfund site. Examples of the social benefits include infrastructure improvements, such as building and expanding access roads and commuter facilities. Construction of the new I-93 Woburn Interchange will alleviate congestion at the intersection of Interstates 93 and 95, which had been rated the third worst in the Commonwealth of Massachusetts.

Positive Impacts From Industri-Plex Cleanup and Redevelopment

Projected Economic Impacts

- An average of over 700 short-term jobs per year during the two years of redevelopment with an estimated total annual income of \$23.6 million.
- Over 4,300 permanent jobs with a total annual income of approximately \$147.4 million.
- Approximately \$118 million in personal spending each year by permanent employees, resulting in over \$4.7 million in annual sales tax revenues.
- Over \$8.7 million in annual State income taxes for permanent employees.
- An estimated \$1.5 million in retail sales tax from Target and a hotel complex.

Redevelopment of Parcel B

- Proposed mix use
- 750,000 square feet of office and hotel space projected

Redevelopment of Parcel A

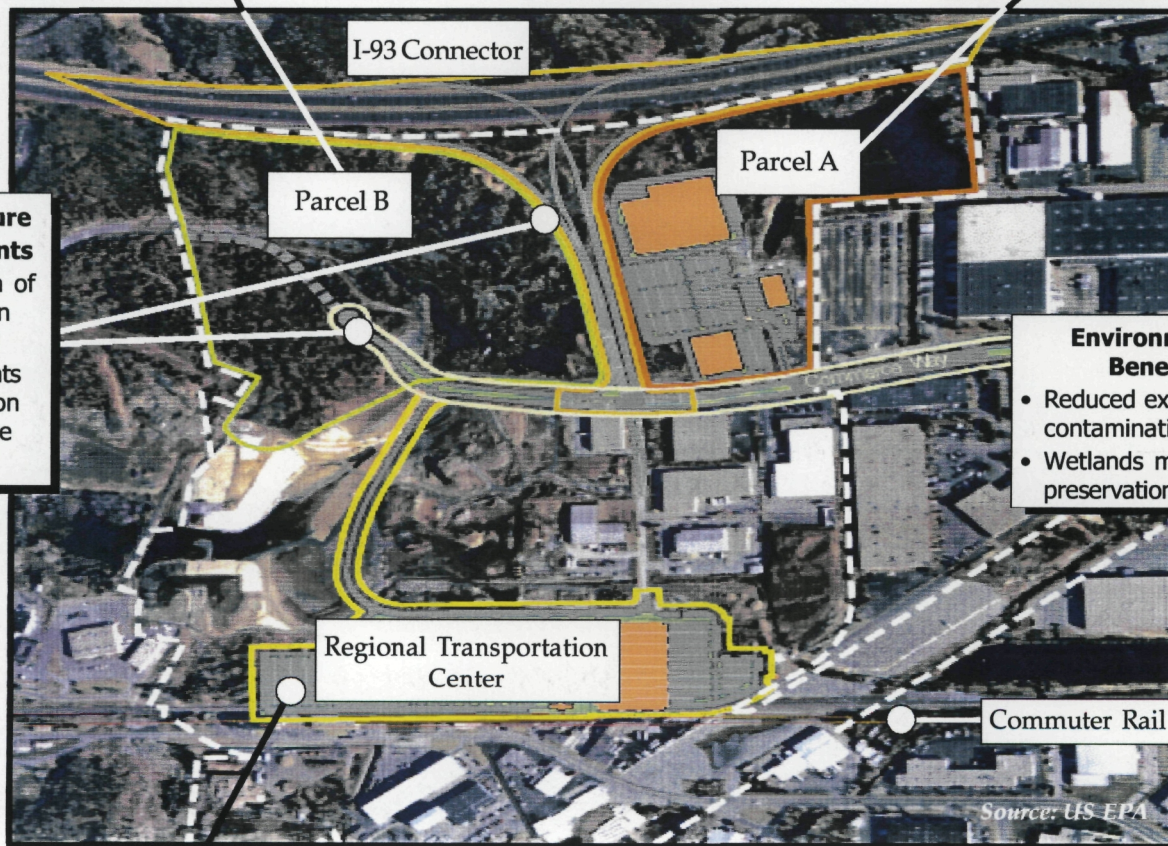
- Future Target Discount Retailer
- 200,000 square feet of commercial space

Infrastructure Improvements

- Construction of I-93 Woburn Interchange
- Improvements and extension to Commerce Way

Environmental Benefits

- Reduced exposure to contamination
- Wetlands mitigation/preservation program



Construction of Regional Transportation Center

- 36-acre transportation facility
- Commuter rail/express bus service to Logan Airport
- 2,400 parking spaces
- Commercial dry cleaner, day care, bicycle facilities

Surrounding Development Projects

- Projected 2 million square feet of office, retail, and light manufacturing space
- Associated income, expenditures, and tax revenue increases

Property Values

Up to \$4.6 million total increase in property values for households within two miles of site.

Social Benefits

- Improved access to Woburn, Wilmington, and Reading retail establishments.
- Improved traffic and safety conditions through alleviation of congestion at a major highway interchange.
- Significant expansion of commuter transportation services.
- Enhanced local economic landscape.

Local traffic conditions in Woburn also will be improved, particularly at the intersection of Mishawum Road and Commerce Way, with the addition of clear lane designations and improved traffic signals. The extension of Commerce Way will promote the eventual connection of Commerce Way with Presidential Way to the north. This connection will improve access from Wilmington and Reading to retail developments and the Regional Transportation Center. Construction of the Center will significantly improve commuter transportation services in the metropolitan Boston area by providing enhanced rail service, park and ride infrastructure, and Logan Airport express bus service.

Social benefits of redevelopment also include intangible community-based effects, such as an improvement in the aesthetic quality of the local landscape and an increased sense of civic pride associated with the successful cleanup and reuse of a Superfund hazardous waste site.

For More Information

The Technical Appendix to this report provides detailed information on the economic impacts associated with this site, including the specific calculations used, sources of information, and possible limitations associated with the calculations. To

obtain copies of the Technical Appendix, or to learn more about economic analyses performed for this site or other Superfund sites, please contact:

John Harris, Senior Advisor for Economics,
Office of Emergency and Remedial
Response
U.S. Environmental Protection Agency
Mail Code 5204G
401 M Street, SW
Washington, DC 20460
(703) 603-9075
harris.john@epamail.epa.gov

For further information about the cleanup and redevelopment of the Industri-Plex site, please contact the site manager:

Joseph LeMay, P.E.
Office of Site Remediation and
Restoration
U.S. Environmental Protection Agency
Region 1
JFK Federal Building (HBO)
Boston, MA 02203
(617) 573-9622
lemay.joe@epamail.epa.gov

For further information about Prospective Purchaser Agreements, please contact:

Tessa Hendrickson
Office of Site Remediation Enforcement
U.S. Environmental Protection Agency
Mail Code 2273A
401 M Street, SW
Washington, DC 20460
(202) 564-6052

To see this fact sheet, or similar fact sheets showing how Superfund sites have been returned to productive use, visit our web site at:

<http://www.epa.gov/superfund/oerr/accomp/>

Economic impacts presented in this fact sheet represent positive local impacts occurring at and around the site. Available information does not allow a determination of whether or how many of the jobs associated with the cleanup and redevelopment are new. Consequently the economic impacts presented in this fact sheet are not net impacts. Although the redevelopment of the site also may generate other positive impacts throughout the rest of the economy, this analysis does not quantify these indirect effects or estimate any offsetting negative effects or costs.

Whenever information specific to the site was available, it was used. However, certain numerical estimates are, of necessity, based on general formulas rather than site-specific information and are, therefore, approximations. Although there may be uncertainty associated with many of these estimates, point estimates are used throughout the fact sheet. The economic impacts reflect the information available at the time of fact sheet development and may change over time. Monetary estimates are expressed in July 1997 dollars. Estimates of jobs associated with cleanup and redevelopment are presented as annualized values, reflecting the average number of jobs per year.



U.S. Environmental Protection Agency
Mail Code 5201G
401 M Street, SW
Washington, DC 20460